

# Sustained ocean observations of interest to SPURS

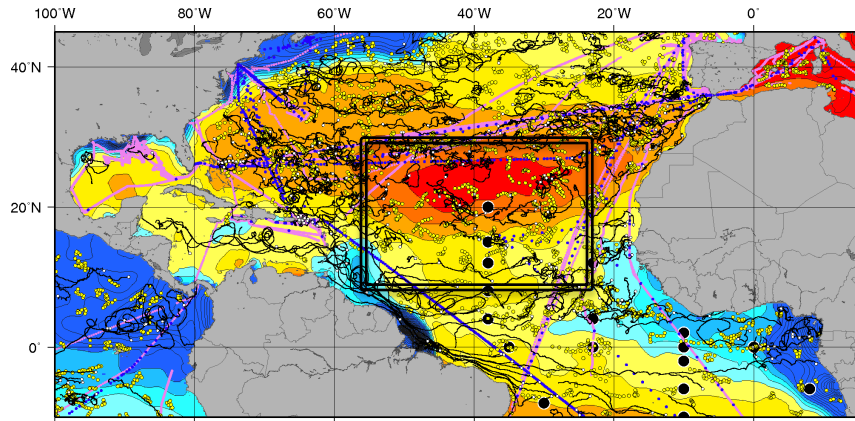
Gustavo Goni, NOAA/AOML



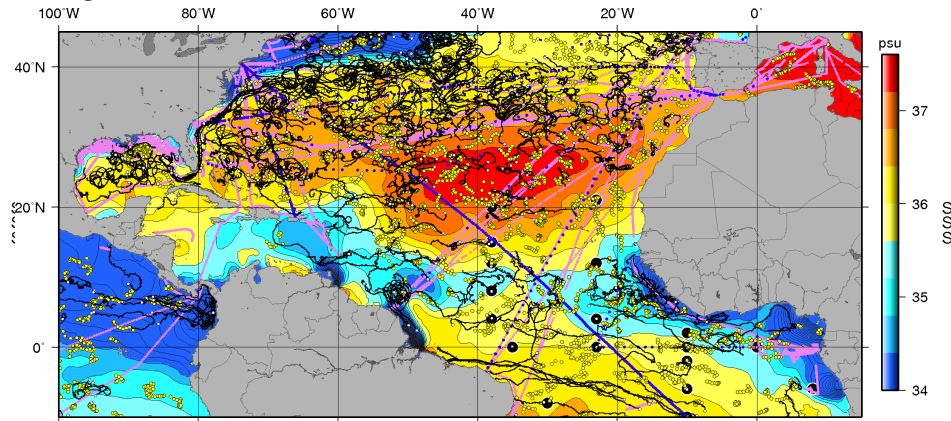
Observing system component	Currently underway	Potential enhancement
XBT repeat transects	25 HD repeat transects globally (AX08, AX07, AX20 of interest to SPURS)	<ul style="list-style-type: none"><li>• Deployment XCTDs</li><li>• Deployment XBTs &lt; 25 km</li></ul>
Surface drifters	~ 1250 globally	<ul style="list-style-type: none"><li>• Add SSS sensors</li><li>• Deployment opportunities</li></ul>
Argo floats	~ 3000 globally	<ul style="list-style-type: none"><li>• SSS</li><li>• Deployment opportunities</li></ul>
Thermosalinographs	3-6 non repeated transects per season (45 ships globally)	<ul style="list-style-type: none"><li>• TSGs in current HD XBT transects</li></ul>
PIRATA moorings	6 moorings (25 total PIRATA, including island stations)	<ul style="list-style-type: none"><li>• Add sensors to current array</li><li>• Deployment opportunities</li></ul>
Hydrographic sections	Various (US, France, Brazil, ..)	<ul style="list-style-type: none"><li>• Enhanced sections</li><li>• Deployment opportunities</li></ul>

# Sustained Ocean Observations during 2010

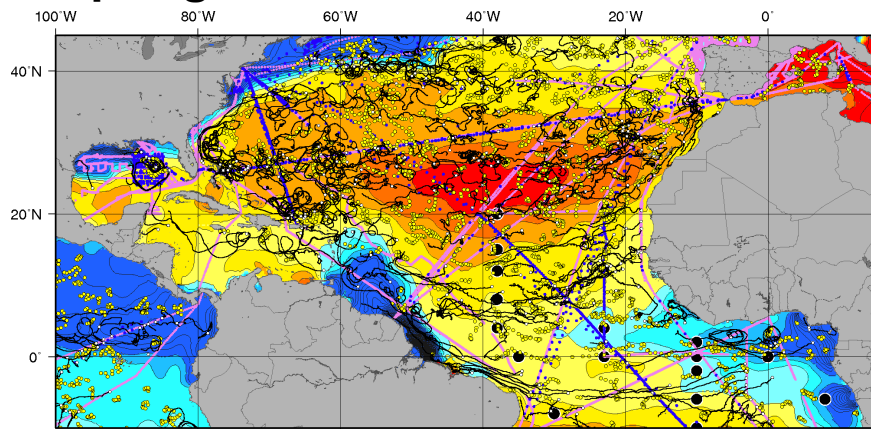
winter



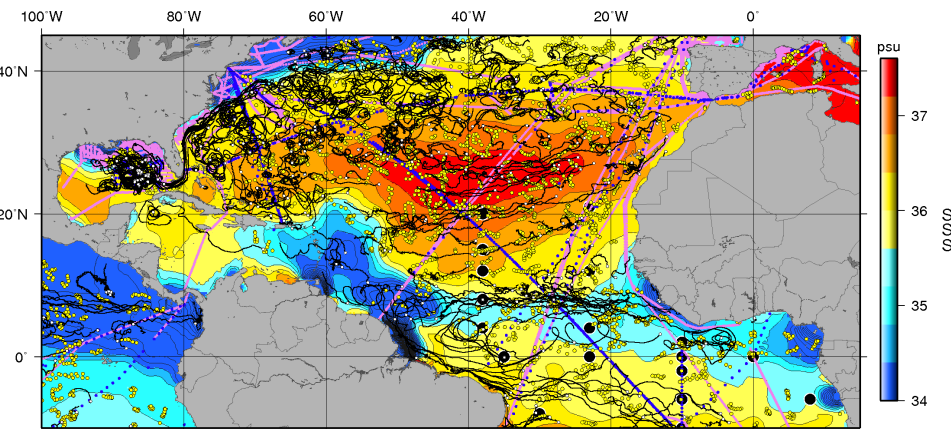
fall



spring



summer



**Observations in 2010 in box (10N-30N, 20W-60W):**

**6 ships with TSGs**

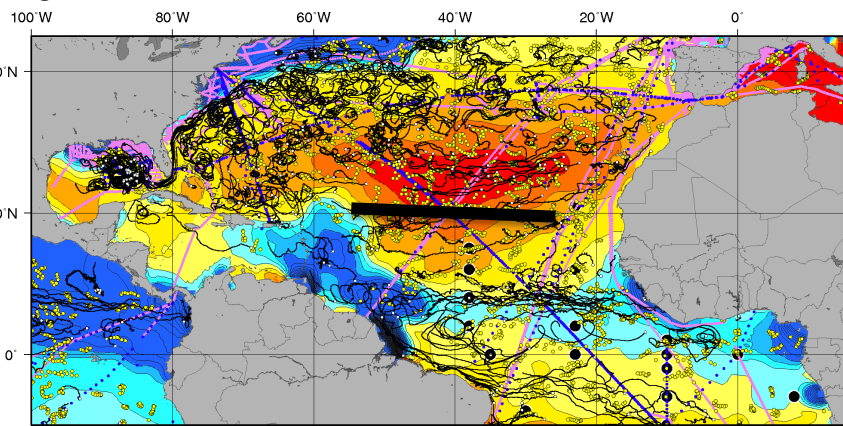
**~ 900 XBTs (observations along fixed transects, 5% global XBTs)**

**~ 120 drifters**

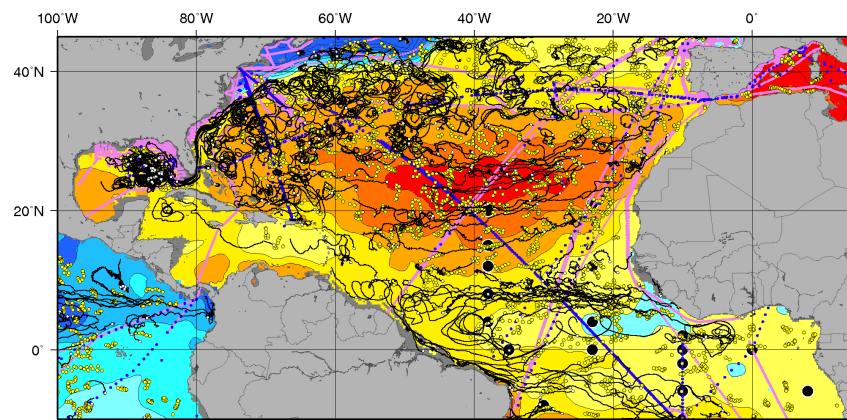
**~ 1100 Argo floats (observations throughout box, 1% global floats)**

# Sustained Ocean Observations during the summer 2010

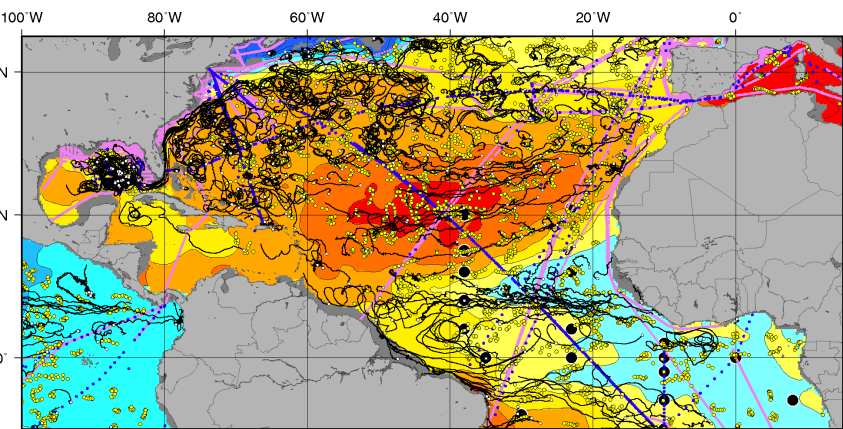
0m



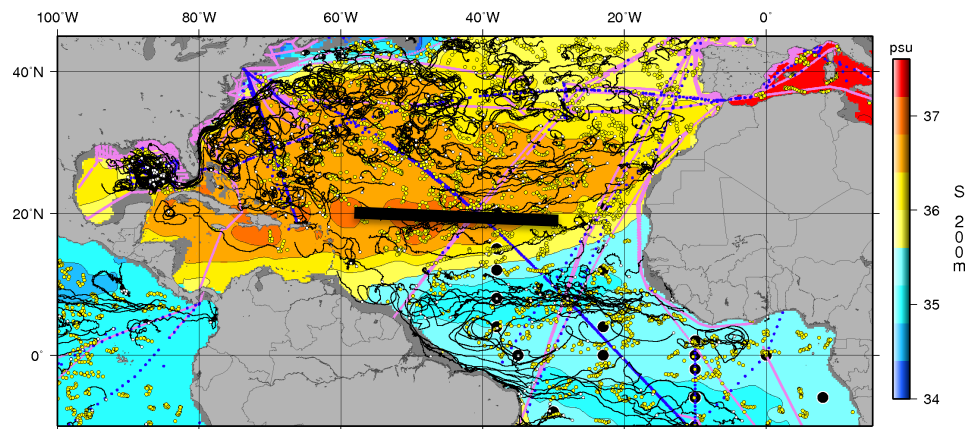
50m



100m

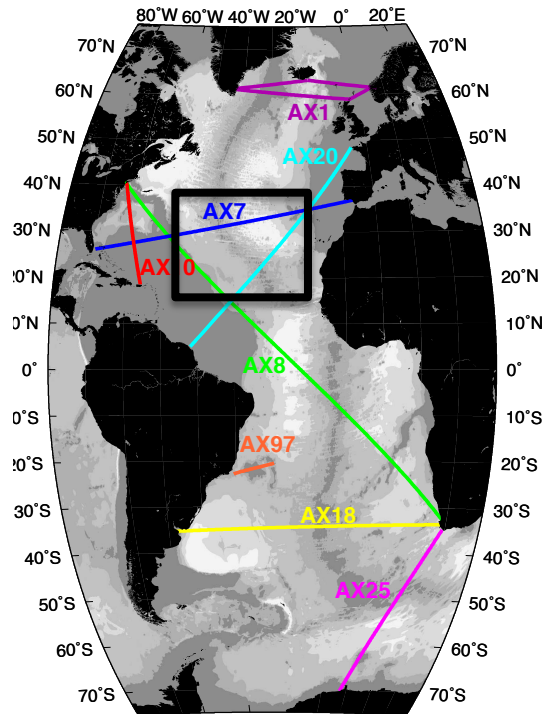


200m





# NOAA/AOML eXpendable BathyThermograph (XBT) Atlantic Network

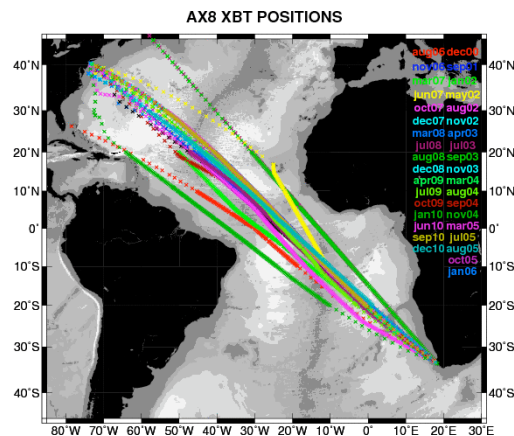


## HD XBT transects relevant to SPURS:

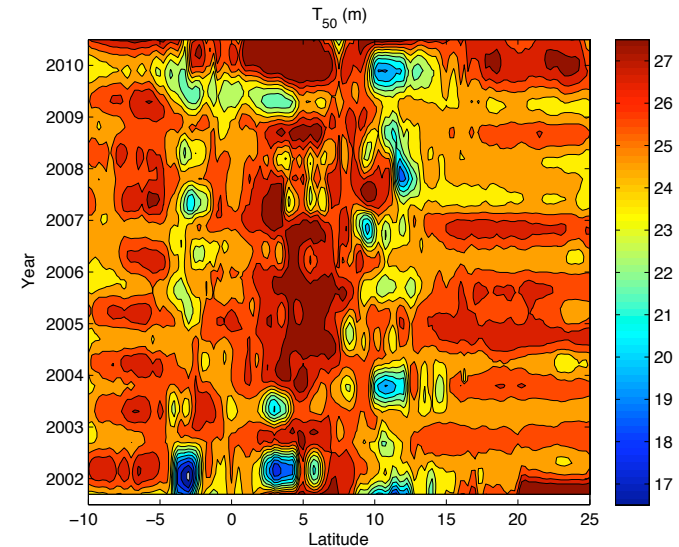
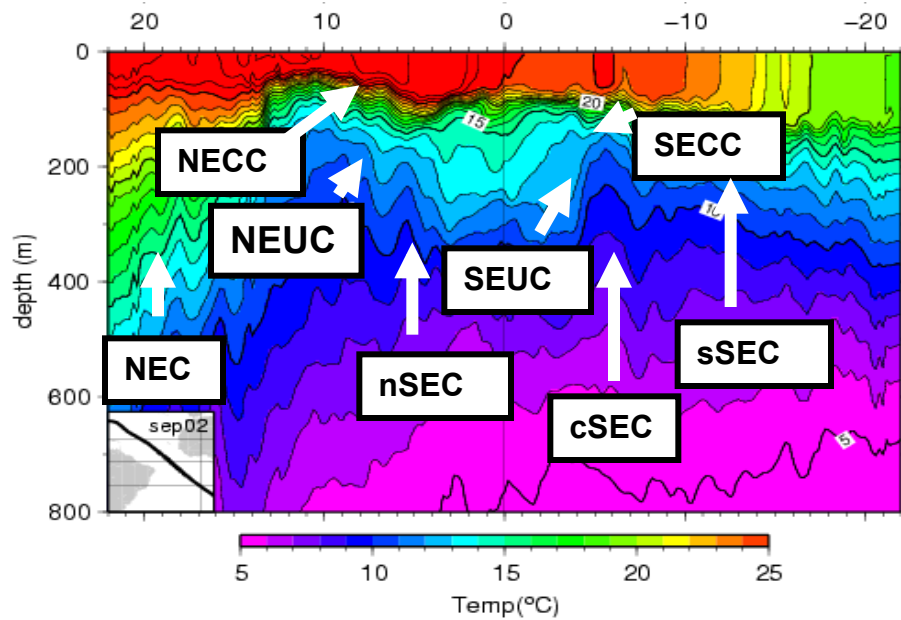
**AX08** (Cape Town – New York) by AOML since 2000 (10 years, 37 sections)

**AX07** (Gibraltar – Miami) by AOML since 1994 (17 years, 62 sections)

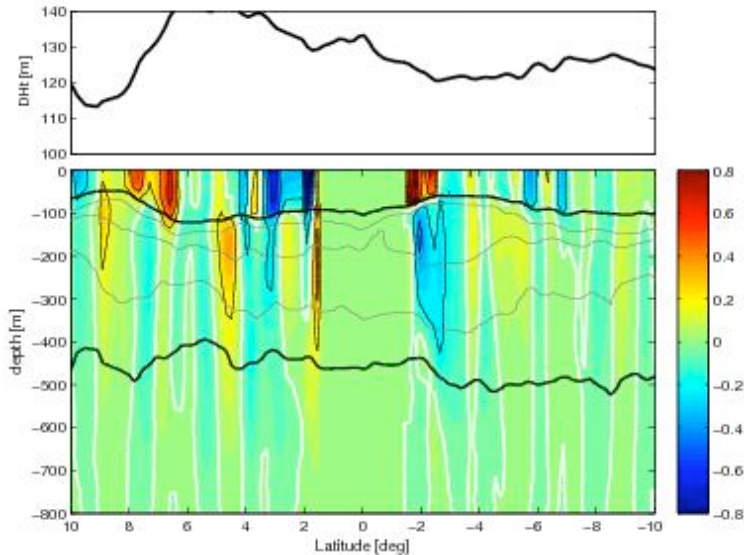
**AX20** (Europe – French Guyana) in LD mode by LOCEAN since 1996 (15 years) and in HD mode by LOCEAN and AOML since 2011



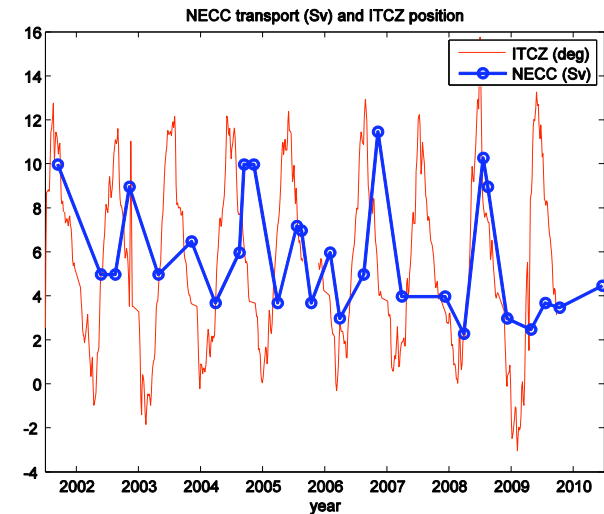
# NOAA/AOML XBT Transect AX08 (Cape Town – New York)



September 2004



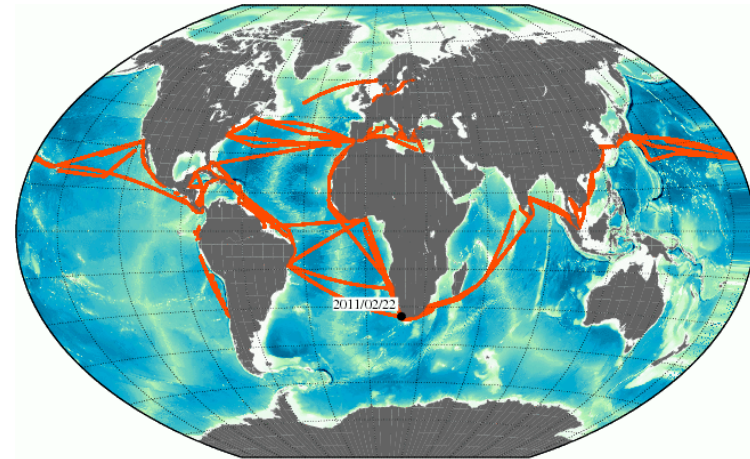
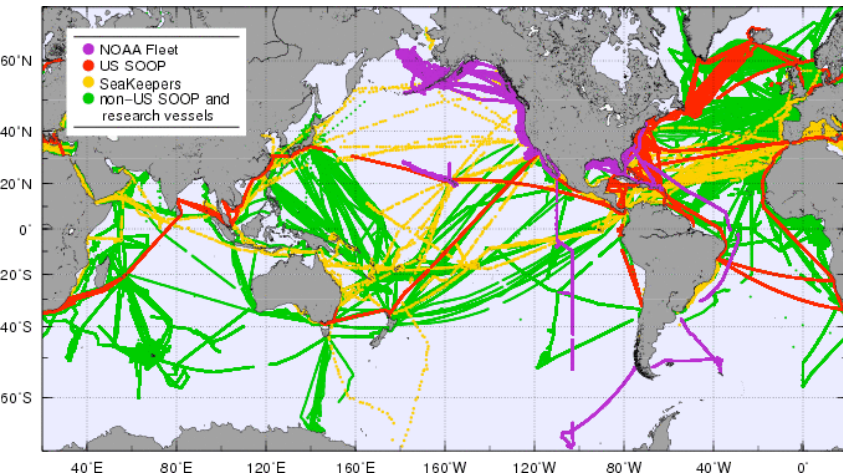
## NECC



# Thermosalinograph Network

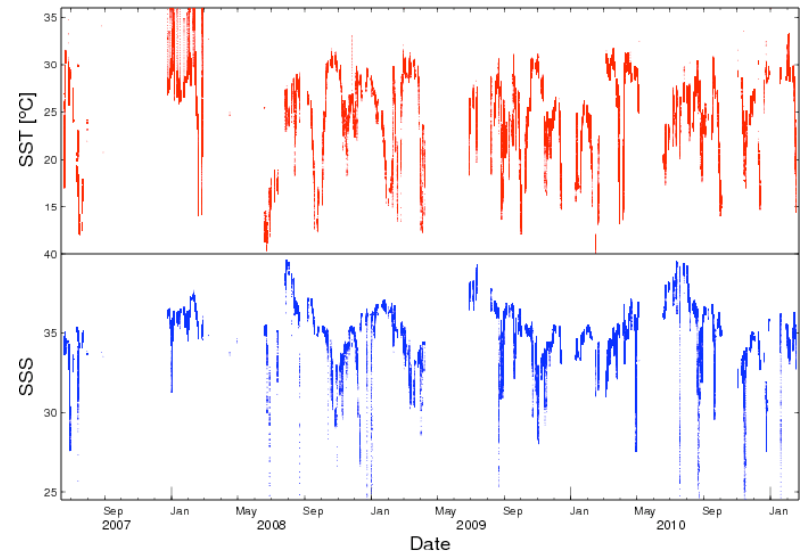
## Semester At Sea

### GTS data 2001-2009



NOAA / AOML / PHOD. Last update: Tue Feb 22 09:02:43 EST 2011

### SST and SSS Time Series



NOAA / AOML / PHOD. Last update: Tue Feb 22 09:01:32 EST 2011



# Current and Potential NOAA/AOML contribution to SPURS

## *Current:*

- Provide deployment opportunities\* from research vessels, mostly while servicing the US PIRATA moorings.
- Continue to provide deployment opportunities\* from Ships Of Opportunity (AX08, AX07, AX20)
- XBT, TSG data QC and distribution through AOML
- Global drifter DAC and US Argo DAC

## *Additional/Potential:*

- Carry out additional AX08 (CPT-NYC) realizations during SPURS \*\*
- Deployment of XBTs < 25km during SPURS
- Install TSGs in AX08 (Cape Town – New York) \*\*
- Deploy XCTDs in AX08, AX07, and/or AX20 \*\*

\* For XBTs, drifters, and Argo floats

\*\* NOAA or NASA support may be needed

